

Montana Department of Transportation
Research Program
June 2006

**EXPERIMENTAL PROJECT
FOR THE EVALUATION OF PAVEMENT MARKERS
(Work Plan)**

Location: MacDonal Pass – Lewis & Clark County
Highway 12, N-8 (C000008); Milepost 23-39

Project Number: Maintenance Project No. 307945

Type of Project: Pavement Markers

Principal Investigator: Craig Abernathy: Experimental Projects Manager
Tom Roberts: Maintenance Reviewer

Objective

Compare current practice using epoxy type markings with various urethane modified type markings for long-term durability and retro-reflectivity. Various types of grinds will be employed to see if this variable will affect performance of the products.

Experimental Design

Beg MP	End MP	Material and Supplier	Miles 4'' White	Miles 4'' Yellow	Type of Grind
23.20	25.20	MODIFIED URETHANE - IPS, HPS-4	5.0	4.0	GROOVE
25.20	26.20	MODIFIED URETHANE - IPS, HPS-4	2.5	2.0	LIGHT
26.20	28.20	MODIFIED URETHANE - EPOPLEX, LS-70	5.0	4.0	GROOVE
28.20	29.20	MODIFIED URETHANE - EPOPLEX, LS-70	2.5	2.0	LIGHT

29.20	31.20	MODIFIED URETHANE -POLY-CARB, MARK-70.3	5.0	4.0	GROOVE
31.20	32.20	MODIFIED URETHANE -POLY-CARB, MARK-70.3	2.5	2.0	LIGHT
32.20	33.20	EPOXY – IPS, HPS-3	2.5	2.0	GROOVE
33.20	34.20	EPOXY – IPS, HPS-3	2.5	2.0	LIGHT
34.20	35.20	EPOXY – EPOPLEX, LS-50	2.5	2.0	GROOVE
35.20	36.20	EPOXY – EPOPLEX, LS-50	2.5	2.0	HEAVY
36.20	37.20	EPOXY – POLYCARB, MARK-55.3	2.5	2.0	GROOVE
37.20	39.00	EPOXY – POLYCARB, MARK-55.3	4.5	3.6	HEAVY

Evaluation Procedures

Installation of pavement markings will be monitored by research and maintenance for consistency of application. Any deviation from work plan and or construction issues will be documented. Initial retro-reflectivity data will be recorded with semiannual readings collected during the duration of the project. A post winter (07) report will document the first winter season performance of the markings. Information will include durability of material, retro-reflectivity and anecdotal information from the section staff responsible for maintaining the road during the winter months. Applicable safety information will also be added in the final report.

Estimated Project Cost

Pending

Evaluation Schedule

Research staff will monitor performance for a period of five years semi-annually, with every year after that reviewed informally, up to ten years. This is in accordance with the Department's "Experimental Project Procedures". Delivery of annual reports are required as well as a final project report (responsibility of the Research Bureau).

2006:	Construction	July installation/construction report
2006-2011:	Annual Evaluations	Semi-annual reports (interim reports based on reported condition of markings)
2011:	Final Evaluation	Final Report
2011:	Annual Evaluations	Informal, optional evaluation based on longevity of treatment – annual reports